

**STS-107 POST LAUNCH FILM REVIEW**  
**KSC Photo/Video Analysis Team**  
**17 January 2003**

**Anomalies**

1. At approximately 80-84 seconds (accurate timing off of film will be done tomorrow) after T-0 a large piece of debris is observed striking the underside (-Z) of the LH wing of the orbiter. The debris appears to originate from the area of the -Y bipod attach point on the external tank. (E-208, E-212) No damage to orbiter TPS is apparent. Further analysis will continue.

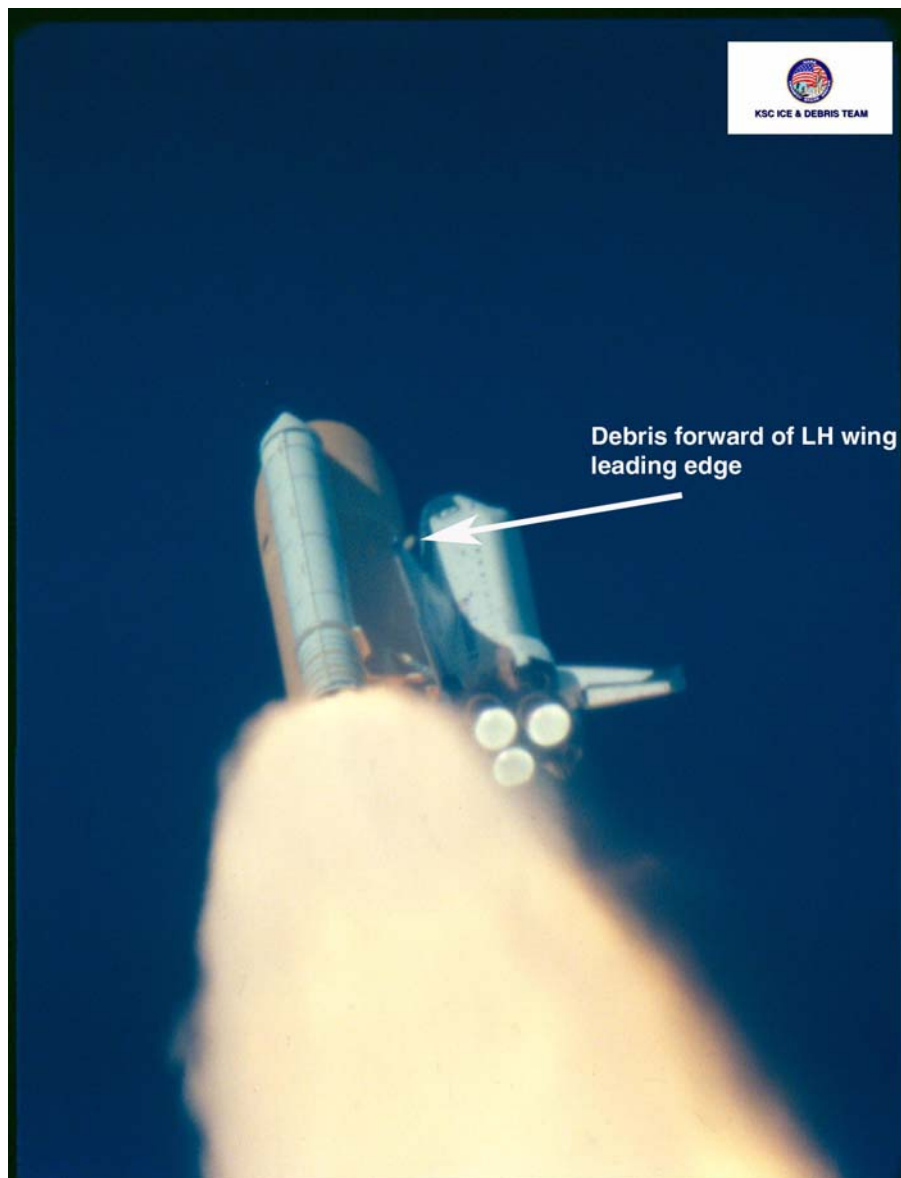


Photo 1.



Photo 2.

2. Approximately 33 seconds after T-0 several particles are observed falling away from the -Z portion of the LH SRB ETA ring. Particles are probably pieces of the instafoam closeout on the ETA ring. (E-220, E-222, E-223, E-224)

### **Observations**

Forward RCS paper covers were observed falling aft during early ascent. Several pieces can be seen falling over LH and RH wings. (E-52, E-222)

GUCP separation and retraction appeared normal. (E-33, E-34, E-39)

Ice particles from the GH2 disconnect fell at T-0. (E-33)

Umbilical purge barrier baggie material fell during ascent. (E-31, E-52, E-207, E-222, E-223)

SRB separation appeared normal. (E-208, E-212)

Particles of SRB aft-skirt instafoam fell along side the SRB plume during ascent. (E-223)

SSME Mach diamond formation sequence was 3-2-1. (E-76, E-77)

Numerous flashes occurred in SSME plume during ascent. (E-208, E-220, E-222, E-223)

Ice particles fell from ET/ORB umbilicals after lift-off. No impact to orbiter lower surface was noted. (E-31, E-52, E-63)

Charring on the ET aft dome was typical. (E-212)

Numerous pieces of facility debris entered field of view after vehicle cleared tower. (E-31, E-36).

Light frost and GOX vapors were present on -Y ET louver. (E-40)

Throat plug material ejected from SRB exhaust hole after T-0. No contact with vehicle. (E-52)

### **Notes**

Review of high-speed films will continue on Saturday, January 18, 2003.

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